

CLAIMS

1. A method for fabricating an insulating glazing unit comprising the steps of:

providing a first glazing sheet having a first perimeter;

connecting a spacer to the first glazing sheet at a location spaced inwardly from the first perimeter;

providing a second glazing sheet having a second perimeter;

connecting the second glazing sheet to the spacer such that the spacer is disposed at a location inward from the second perimeter whereby an outwardly-facing channel is formed between the glazing sheets and the spacer and an insulating chamber is formed inward of the spacer between the glazing sheets;

hermetically sealing the insulating chamber by applying a primary sealant into the outwardly-facing channel; and

applying a secondary sealant into the outwardly-facing channel after at least a portion of the primary sealant is applied.

2. The method of claim 1, further comprising the step of providing a foam-bodied spacer carrying a desiccant.

3. The method of claim 2, further comprising the step of providing the spacer with a pair of notched corners.

4. The method of claim 3, further comprising the step of applying the primary sealant only into the notched corners of the spacer.

5. The method of claim 1, further comprising the step of providing a metal spacer.

6. The method of claim 4, further comprising the step of providing the spacer with a pair of notched corners.

7. The method of claim 6, further comprising the step of applying the primary sealant only into the notched corners of the spacer.

8. The method of claim 1, wherein the primary sealant is hot melt butyl.

9. The method of claim 1, wherein the primary sealant is polyisobutylene.

10. The method of claim 1, wherein the primary sealant is a curable low permeable sealant.

11. The method of claim 1, wherein the secondary sealant is a thermosetting sealant.

12. The method of claim 1, wherein the secondary sealant is a structural sealant.

13. The method of claim 12, wherein the secondary sealant is one of a silicone, a polysulfide, and a polyurethane.

14. The method of claim 1, wherein the primary sealant is applied to entire perimeter of the channel before the secondary sealant is applied.

15. The method of claim 14, wherein the primary sealant is applied at a first station with a first application nozzle and the secondary sealant is applied at a second station with a second application nozzle; the second station being spaced from the first station.

16. The method of claim 1, wherein the primary sealant is applied into the channel with a first applicator and the secondary sealant is applied with a second applicator that trails the first applicator.

17. The method of claim 16, further comprising the step of retracting the applicator that applies the primary sealant.

18. The method of claim 1, wherein the primary sealant is applied only to the corners of the channel adjacent the spacer and glazing sheets.

5 19. A method for sealing an insulating glazing unit having first and second glazing sheets spaced apart by a spacer disposed inward of the perimeters of the glazing sheets to form an outwardly-facing channel; the insulating glazing unit having an insulating chamber disposed inward of the spacer between the glazing sheets; the method comprising the steps of:

10 hermetically sealing the insulating chamber by applying a primary sealant to at least the corners of the channel disposed adjacent the spacer and glazing sheets; and

applying a secondary sealant in the outwardly-facing channel over the primary sealant; the secondary sealant being different from the primary sealant.

15 20. The method of claim 19, wherein the primary sealant is hot melt butyl.

21. The method of claim 19, wherein the primary sealant is polyisobutylene.

20 22. The method of claim 19, wherein the secondary sealant is a structural sealant.

23. The method of claim 19, wherein the secondary sealant is a thermosetting sealant.

24. The method of claim 19, wherein the primary sealant is applied only in the corners adjacent the spacer and the glazing sheets.

25. The method of claim 19, wherein the insulating chamber is hermetically sealed by simultaneously applying the primary sealant to the glazing sheets and the spacer.

26. A method of forming an insulating glazing unit comprising the steps of:

providing a first glazing sheet having a first perimeter;

connecting a metal spacer to the first glazing sheet at a location spaced inwardly from the first perimeter;

providing a second glazing sheet having a second perimeter;

connecting the second glazing sheet to the spacer such that the spacer is disposed at a location inwardly from the second perimeter whereby an outwardly-facing channel is formed between the glazing sheets and the spacer and an insulating chamber is formed inwardly of the spacer between the glazing sheets;

applying a primary sealant into the outwardly-facing channel to hermetically seal the insulating chamber; and

applying a secondary sealant over the primary sealant.

27. The method of claim 26, wherein the metal spacer is free of sealant when it is connected to the first and second glazing sheets.

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28. The method of claim 26, wherein the secondary sealant is a structural sealant.

29. The method of claim 26, wherein the primary sealant is disposed in the corners between the glazing sheets and the metal spacer.

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